Claims

1. A method of forming an organic light emitting diode comprising the steps of:

   - providing a substrate comprising a first electrode for injection of charge carriers of a first type
   - forming a charge transporting layer by depositing over the substrate a charge transporting material for transporting charge carriers of the first type, the charge transporting material being soluble in a solvent;
   - treatment of the charge transporting layer to render it insoluble in the solvent;
   - forming an electroluminescent layer by depositing onto the charge transporting layer a composition comprising the solvent, a phosphorescent material and a host material; and
   - depositing over the electroluminescent layer a second electrode for injection of charge carriers of a second type.

2. A method according to claim 1 wherein the first electrode is an anode; the second electrode is a cathode; the charge carriers of the first type are holes; and the charge carriers of the second type are electrons.

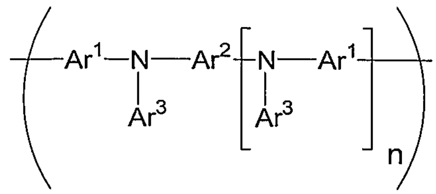
3. A method according to claim 1 or 2 wherein the charge transporting material comprises a cross-linkable material and the treatment comprises subjecting the charge transporting layer to heat or electromagnetic radiation in order to cross-link the charge transporting material

4. A method according to claim 1 or 2 wherein the charge transporting layer is substantially free of cross-linkable groups and the treatment comprises subjecting the charge transporting layer to heat.

5. A method according to any one of claims 1-4 wherein the charge transporting material is a polymer.

6. A method according to claim 5 wherein the polymer comprises an optionally substituted triarylamine repeat unit.

7. A method according to claim 6 wherein the triarylamine repeat unit comprises an optionally substituted repeat unit of formula (I):



(I)

wherein each Ar^1, Ar^2 and Ar^3 is the same or different and independently represents optionally substituted aryl; and n is 0 or 1.

8. A method according to any one of claims 5-7 wherein the polymer comprises a repeat unit selected from optionally substituted fluorene, indenofluorene, spirofluorene and phenylene.

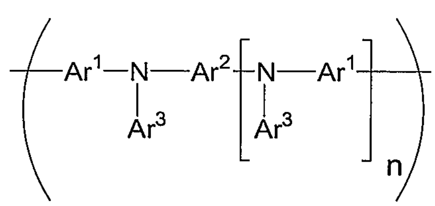
9. A method according to any preceding claim wherein the phosphorescent material is a metal complex.

10. A method according to any preceding claim wherein the host material is a host polymer.

11. A method according to claim 10 wherein the host polymer comprises a repeat unit as defined in claim 7 or claim 8.

12. An organic light emitting diode obtainable by the method according to any preceding claim.

13. An organic light emitting diode comprising, in sequence, an anode; a hole transporting layer; an electroluminescent layer comprising a phosphorescent material and a host material; and a cathode, wherein the hole transporting layer is a polymer comprising an optionally substituted repeat unit of formula (I):



(I)

wherein each Ar^1, Ar^2 and Ar^3 is the same or different and independently represents optionally substituted aryl; and n is 0 or 1.

14. An organic light emitting diode according to claim 13 wherein the polymer comprises a repeat unit selected from optionally substituted fluorene, indenofluorene, spirofluorene and phenylene.

15. An organic light emitting diode according to claim 13 or 14 wherein a hole injecting layer comprising a conductive organic material is located between the anode and the hole transporting layer.

16. An organic light emitting diode according to any one of claims 13-15 wherein the phosphorescent material is a metal complex.